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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: **Joseph A. Bobier**

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For: **Missing Cycle Based Carrier Modulation**

Attorney Docket: **ICL-2-002**

Group Art Unit: **2634**

Examiner: **Fan, Chieh M**

EL ER654748711US

Mail Stop NON-FEE AMENDMENT
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

RESPONSE

In response to the Office Action mailed November 10, 2003, Applicant appreciates the Examiner's allowance of claims 49, 50, and 54 but respectfully requests reconsideration of the disallowed claims in the above-referenced application in light of this response and amendment as stated in the following paragraphs.

Claims 1-30, 51-53, and 55-57 were objected to by the Examiner because of informalities that have been corrected or canceled in the amendment below.

The Examiner has rejected claims 1, 2, 26-30 and 55 under 35 U.S.C. 102(b) as being anticipated by Hiramatsu (U.S. Pat. No. 5,136,614). The Examiner has stated in his rejection that Hiramatsu discloses a method for transmitting binary information from an information

stream that anticipates the claimed invention. The Examiner rejected most of the rest of the claims under 35 U.S.C. 103 (a) as being unpatentable over Hiramatsu in view of several other patents and combinations thereof.

Applicant certainly appreciates the Examiner's allowance of claims 49 through 54 when the informalities are corrected as has been done in the amendment below, but Applicant respectfully disagrees with the Examiner's finding that Hiramatsu anticipates or, in view of the other cited patents, substantially makes obvious Applicant's invention to someone skilled in the art.

Applicant's review of Hiramatsu reveals it is in fact only a system for spread spectrum communication system using an on-off keying system (see column 1, lines 10-14 and column 2 lines 30-40). No where in Hiramatsu is it disclosed, or even suggested that Hiramatsu's system would or could be used to construct this very narrowband RF signal capable of transmitting digital information at the carrier frequency rate as claimed in claims of this important application.

The Examiner has relied on the figures of Hiramatsu, and in particular figures 8(A) and 8(B) to find one of the crucial elements of beginning and ending the transmitted cycle at the zero crossing point. Applicant respectively suggests those figures are for illustrative purposes only and the fact that the drawings display the binary and carrier signals as lining up in this manner it is merely a drawing convention and not meant to display how the Hiramatsu system works.

Hiramatsu, is used for generation and amplification of the wideband signals used in spread spectrum communications systems. And although looking at the figure, and ignoring standard drawing convention, one might assume the system keys on and off at the zero crossing points, except that the Hiramatsu modulation actually creates very wideband signals, not the extremely narrowband signal of this application. This narrowband signal happens because of the precision of switching on and off the signal only at the zero crossing points, thus creating very few side bands. Applicants complete review of the Hiramatsu patent confirms this as no where

in the patent is it suggested, or even hinted at that the keying is done at the zero crossing points and thus the system of Hiramatsu results in a spread spectrum signal that is broadcast.

Applicant appreciates Examiner's detailed and through review of this application as evidenced by the referenced prior art, but Applicant believes the Examiner has missed a very important feature of this invention. That is, the deletion of the amplitude is applied only on the discrete wavelet or number of discrete wavelets. This is totally different from any other type of modulation. By applying the deletion on only discrete wavelets almost no sideband energy is generated, thus creating very narrow bandwidths capable of transmitting very fast data rates.

All the prior art sited, and all other prior art to the Applicants knowledge, apply modulation onto the carrier wavelets without regard to the discrete wavelets or pulses of the carrier signal. Thus as the modulation frequency increases and the carrier frequency increases in attempts to increase the information transmission rate, the sidebands created by harmonics increase and require broader and broader bandwidths to transmit the information. The prior art cited attempts to work within this accepted framework of faster transmission means broader bandwidths.

Applicant's disclosure completely changes this accepted framework by applying the deletion (modulation) only on the complete 360 degree cycle wavelets. By doing so very few low energy sidebands are created yet the deletion or non-deletion of the discrete wavelet can be detected, thus transmitting digital information at a rate up to the carrier frequency.

Applicant's review of the claims as written has revealed how the Examiner may have interpreted these important claims as describing the very different prior art. Thus, along with correcting the informalities, Applicant has amended the independent claims below by adding language specifying that it is only an integer number of 360 degree cycle wavelets that are deleted making it clearer that only complete discrete wavelets are deleted since integer numbers only represent whole numbers. None of the prior art cited by the Examiner alone or in combination disclose or even suggest the deletion of an integer number of discrete wavelets, and

thus applicant strongly believes this should remove any question of anticipation or obviousness from the objected to claims. Applicant has also canceled claims 55-61 and added a new independent claim along with one dependant claim that specifically describes and claims the signal Applicant is disclosing in order to better help the Examiner understand the unique nature of the signal created by the methods, systems, and apparatuses of the other claims.

The Examiner has found in Hiramatsu, some, but not all, of the elements, of Applicant's invention and applied assumptions based on drawing conventions to thus state Applicant's invention was anticipated. The problem with this is the Hiramatsu, and the other cited patents are far removed from the type of invention claimed by the Applicant, with no suggestion in any of these patents of combining the unique discrete wavelet deletion technique into a RF signal and method, system or apparatus for generating such signal as claimed in claims.

Given the total differences in the RF signal and method of generation disclosed by the references as compared with Applicant's invention, Applicant strongly believes the Examiner has not presented a prima facie case of anticipation or obviousness (not to mention the discrete wavelet limitation required by the claims which is missing from all of the references). This is because the references cited by the Examiner, alone or taken together, do not anticipate or teach a suggestion to combine or modify the references, such that the combination or modification would result in Applicant's invention and would be sufficient to have made the claimed subject matter of the Applicant's invention anticipated or obvious to one of ordinary skill in the art. It is not enough that the Examiner present references that contain the assorted features of the invention (which Applicant believes the Examiner has not accomplished in this case). The Examiner must also show why it would appear that the reference would anticipate or would have been combined. The Hiramatsu, and other disclosures in no way suggest an invention of a very narrowband signal and method of data transmission as claimed in Applicant's application.

The present invention, i.e., an invention with the ability greatly increase the transmission of data and greatly decrease the bandwidth required, as defined in claims, is not anticipated, obvious or taught by the references cited. The Examiner has used the claimed invention as a

reference against itself as if it had preceded itself in time and discovered prior art disclosures that are really not disclosures at all but merely drawing conventions that have nothing to do with the actual prior art. Legal authority invalidates such an analytical or reverse engineering approach to patent examinations. It is not Applicant's burden to refute the Examiner's position that it would have been anticipated or obvious to one of ordinary skill in this art at the time this invention was made, to arrive at the present invention in view of the referenced patents. It is the burden of the Examiner to show some teaching or suggestion in the references to support this allegation. Uniroyal, Inc. v. Rudkin-Wiley Corp., 5 USPQ2d 1434 (Fed. Cir. 1988).

With respect to evaluation of claims under 35 U.S.C. 103, "every portion of the ... claim must be considered in determining ... obviousness" [emphasis added]. In re Duva, 165 USPQ 90, 94 (CCPA 1967). In order to combine references, there must be a "suggestion of the desirability" of the combination. In re Noznik, Tatter and Obenauf, 178 USPQ 43 (CCPA 1973). An explanation as to the reason for combining the cited references was not proffered, only that obviousness was evident based on a speculative combination of the references. No combined teaching in the references would give one of ordinary skill in the art the invention defined by the claims.

A finding by the Examiner that a claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made based merely upon finding similar elements in a prior art reference would be "contrary to statute and would defeat the congressional purpose in enacting Title 35." Panduit Corp. v. Dennison Mfg. Co., 1 USPQ2d 1593, 1605 (Fed. Cir. 1987). Thus, the Examiner cannot pick and choose among the individual elements of assorted prior art references to attempt to recreate the claimed invention. See, e.g., Azko N.V. v. United States International Trade Commission, 1 USPQ2d 1241, 1246 (Fed. Cir. 1986), cited with approval in SmithKline Diagnostics, Inc. v. Helena Laboratories Corp., 8 USPQ2d 1468 (Fed. Cir. 1988). As stated in In re Sernaker, 217 USPQ 1, 6 (Fed. Cir. 1983):

> ... prior art references in combination do not make an invention obvious unless something in the prior art references would suggest the advantage to be derived from combining their teachings.

The difficult task of the Examiner is to not "fall victim to the insidious effects of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W.L. Gore & Associates v. Garlock, Inc., 22 USPQ 303, 312-313 (Fed Cir. 1983).

As the Federal Circuit observed in Orthopedic Equipment Co. v. United States, 217 USPQ 193, 199 (Fed Cir. 1983):

> The question of nonobviousness is a simple one to ask, but difficult to answer ... The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness ...

The claims in this important patent application were in fact drawn to a novel, useful and nonobvious invention. Accordingly, Applicant respectfully submits that the invention claimed is clearly patentable over such prior art or any combination thereof.